

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Liang Wang**

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报告题目:

无人车控制中的双向链式稳定性研究

邀请人: 林群 院士

谢和虎 研究员

报告时间: **2018 年 7 月 15 日 (周日)**

上午 10:10-11:10

报告地点: 数学院南楼七层

702 教室

Abstract:

A "twisted Pascal triangle" --whose entries correspond to the coefficients of a family of recursive polynomials --- is explored in this paper. The corresponding recursive polynomials help us understand the twisted Pascal triangle more deeply. These methods can be used to analyze the transfer functions of two-directional information flow system, such as a cascade of "spring-damper-mass". We also prove that such "spring-damper-mass" system is strictly "chain stable". One straightforward application of this conclusion is the design of new versions of adaptive cruise control (ACC) system which suppress the "stop-and-go" traffic jams that sadly are all too common today.

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